

**COMMONWEALTH OF VIRGINIA**  
**Department of Environmental Quality**  
**West Central Regional Office**

**FINAL STATEMENT OF LEGAL AND FACTUAL BASIS**

Southern Finishing Co. Inc.  
801 East Church Street, Martinsville, Virginia  
Permit No. (WCRO-30515)

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Southern Finishing Co., Inc. has applied for *renewal* of their Title V Operating Permit, originally issued to Pulaski Furniture Corporation, Martinsville Division for its Martinsville facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: \_\_\_\_\_ Date:  
Lillian Alexander  
540/562-6783

Air Permit Manager: \_\_\_\_\_ Date:  
Dr. Michael J. Scanlan  
Air Regional Permit Manager

## **FACILITY INFORMATION**

### Permittee

Southern Finishing Co., Inc.  
801 East Church Street, Martinsville VA 24115

### Facility

Southern Finishing Co., Inc.  
801 East Church Street, Martinsville VA

AFS ID No.: 51- 690-0500

## **SOURCE DESCRIPTION**

SIC Code: 2511 (wood household furniture)  
2514 (metal household furniture)

Southern Finishing Company, Inc. is a manufacturer of wood and metal household furniture. The original source registration (for Pulaski Furniture Corp., Martinsville Div.) was received on November 10, 1972. The facility consists of two small boilers and various woodworking and metal furniture finishing equipment. The facility has just recently added metal furniture finishing to its manufacturing lineup.

One new source review permit dated May 5, 2004 (supercedes permit issued July 2, 2003) to construct and operate 2 metal finishing spray booths and 3 wood finishing spray booths is in effect for this facility.

The facility is a Title V major source of VOCs and HAPs. This source is located in an attainment area for all pollutants, and is a PSD minor source.

## **COMPLIANCE STATUS**

The last full compliance evaluation of this facility, including a site visit, was conducted on May 10, 2004. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on the compliance evaluation, the facility and DEQ are currently negotiating the terms of a Consent Order to resolve the Notices of Violation that were issued on June 2, 2004 alleging noncompliance with 40 CFR 63 Subpart JJ, the reporting requirements of the October 17, 2003 Consent Order and the monitoring, record keeping and reporting requirements of the

Title V permit.

## EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD)	PCD ID	Pollutant Controlled	Applicable Permit and/or Regulation
<b>Fuel Burning Equipment - 9 VAC 5-40-880 et. seq. (Rule 4-8)</b>							
ES- 1		Bigelow Woodwaste/#2 f.o. boiler; installed 1963	9.0 MMBtu/hr	multicyclone		PM	MACT DDDDD**
ES-2		Bigelow Woodwaste/#2 f.o. boiler; installed 1963	9.0 MMBtu/hr	multicyclone		PM	MACT DDDDD**
<b>Woodworking Equipment - 9 VAC 5-40-2250 et. seq. (Rule 4-17)</b>							
ES - 4		various saws, shapers, sanders	varies	5 fabric filters		PM	CAM
<b>Wood Furniture Finishing - 9 VAC 5-40-240 et. seq. (Rule 4-4)</b>							
ES- 3a		12 conventional spray booths	varies	fiber filters or equivalent		PM	MACT JJ CO 10/17/2003
<b>Wood Furniture Finishing - 9 VAC 5-50-240 et. seq. (Chapter 50, Part II, Article 4)</b>							
WB - 1 - 3		3 conventional spray booths	varies	fiber filters or equivalent		PM	nsr 5/5/2004 MACT JJ
<b>Metal Furniture Finishing - 9 VAC 5-50-240 et. seq. (Chapter 50, Part II, Article 4)</b>							
ES- 3b		2 metal finishing spray booths	varies	fiber filters or equivalent		PM	nsr 5/5/2004 NSPS EE MACT RRRR

\* The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

\*\* however, there are no applicable requirements for these boilers

## EMISSIONS INVENTORY

Facility-wide emissions for calendar year 2003 are summarized below:

### 2003 Actual Emissions

	2003 Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	NO <sub>2</sub>
Total	30.96	4.46	1.70	3.29	1.70

### 2003 Facility Hazardous Air Pollutant Emissions

Pollutant	2003 Hazardous Air Pollutant Emission in Tons/Yr
ethyl benzene	0.12
glycol ethers	0.36
methyl ethyl ketone (MEK)	0.17
methanol	1.96
xylene	0.57
toluene	1.16
Total HAPs	4.34

## EMISSION UNIT APPLICABLE REQUIREMENTS

### Emission units ES 1 and 2 (Bigelow boilers)

- are subject to emission standards for existing fuel burning regulations as specified in Rule 4-8 (9 VAC 5-40-880 et. seq.)
- are subject to the industrial boiler MACT (DDDDD), however there are no applicable requirements for small solid fuel boilers

### Emission units ES-4 (woodworking equipment)

- are subject to emission standards for existing woodworking operations as specified in Rule 4-17 (9 VAC 5-40-2250 et. seq.)
- fabric filters associated with the woodworking operations are subject to Compliance Assurance Monitoring (CAM) requirements as specified in 40 CFR Part 64 (§64.1 - 64.10)

### Emission units ES-3a (12 conventional wood finishing spray booths)

- are subject to emission standards for general process operations as specified in Rule 4-4 (9 VAC 5-40-240 et. seq.)

- are subject to the requirements of the Furniture Finishing MACT (JJ)
- are subject to the Consent Order finalized October 17, 2004 and resulting SEP

Emission units WB 1-3 (3 conventional wood finishing spray booths)

- are subject to emission standards for new and modified stationary sources as specified in 9 VAC 5-50-240 et. seq.
- are subject to the requirements set forth in new source review permit dated May 5, 2004
- are subject to the requirements of the Furniture Finishing MACT (JJ)

Emission units ES-3b (2 metal furniture finishing spray booths)

- are subject to emission standards for new and modified stationary sources as specified in 9 VAC 5-50-240 et. seq.
- are subject to the requirements set forth in new source review permit dated May 5, 2004
- are subject to the requirements of the Metal Furniture Finishing MACT (RRRR)
- are subject to the requirements of new source performance standards for Metal Furniture Finishing (NSPS EE)

**Limitations**

Limitations for emission units ES 1 and 2 (Bigelow boilers)

- Particulate emissions from each of the Bigelow boilers shall be controlled by the use of a multicyclone.
- The approved fuels for the Bigelow boiler(s) are wood waste and distillate oil. Distillate oil is defined as fuel oil that meets the specifications for fuel oil numbers 1 or 2 under the American Society for Testing and Materials, ASTM D396-78 "Standard Specification for Fuel Oils."
- Emissions from the operation of the Bigelow boilers(s) shall not exceed the limits specified below:

Particulate Matter	0.50 lbs/MMBtu
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Sulfur Dioxide	26.4 lbs/hr
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- Visible Emissions from each of the Bigelow boiler stacks shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.
- Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and

familiarization of the manufacturer's operating instructions, at minimum.

Limitations for emission units ES-4 (woodworking equipment)

- Particulate emissions from the woodworking equipment shall be controlled by five separate fabric filters. The fabric filters shall be provided with adequate access for inspection.
- Visible emissions from the fabric filters associated with woodworking equipment (ES-4) shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60% opacity.
- Emissions from the operation of the woodworking equipment (ES-4) shall not exceed the limits specified below:

Particulate Matter                      0.05 grains per standard cubic feet of exhaust gas

Limitations for emission units ES-3a (12 conventional wood finishing spray booths)

- Visible emissions from the furniture finishing operations (ES-3a) shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60% opacity.
- Particulate emissions from the 12 conventional wood finishing spray booths (ES-3a) shall be controlled by fiber filters or equivalent filters. Each filter shall be provided with adequate access for inspection and shall be in operation when the spray booths are operating

Limitations for emission units WB 1-3 (3 conventional wood finishing spray booths) and ES-3b (2 metal furniture finishing spray booths)

- Particulate emissions from the metal (ES 3b) and wood finishing (WB 1-3) spray booths shall be controlled by a fiber filter or equivalent filter. The filter shall be provided with adequate access for inspection and shall be in operation when the paint booths are operating.
- Volatile organic compound emissions from coating in the metal spray booths (ES 3b) are limited to 3.0 lb VOC/gallon as a monthly average.
- Fugitive VOC emission controls shall include the following, or equivalent, as a minimum. Volatile organic compounds shall not be intentionally spilled, discarded to sewers, stored in open containers or handled in any other manner that would result in evaporation beyond that consistent with air pollution control practices for minimizing emissions.
- The annual throughput of HAPs to the two metal finishing spray booths (ES 3b) combined shall be zero (0), calculated monthly as the sum of each consecutive twelve (12) month period.

- The annual throughput of volatile organic compounds to the new wood coating spray booths (WB 1-3) and the two metal finishing spray booths (ES 3b) combined shall not exceed 39.4 tons per year, calculated monthly as the sum of each consecutive twelve (12) month period.
- Visible emissions from each spray booth exhaust shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
- Emissions from the operation of the new wood coating spray booths (WB 1-3) and the two metal finishing spray booths (ES 3b) combined shall not exceed the limits specified below:

Volatile Organic Compounds	3.3 tons/month	39.4 tons/yr
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- Emissions from the operation of all the metal finishing spray booths (ES 3b) shall not exceed the limits specified below in accordance with NSPS EE:

Volatile Organic Compounds	0.9 kilogram of VOC/liter of solids applied = 7.51 lbs VOC/gallon solids applied
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- Coatings, thinners, and cleaning materials used in the metal finishing spray booths (ES 3b) shall contain *no* hazardous air pollutants (HAPs), as defined by §112(b) of the Clean Air Act, in accordance with MACT RRRR. Compliance with this condition is required upon the MACT compliance date for a “new” source.

## Monitoring

The monitoring and recordkeeping requirements in Condition 14 of the May 5, 2004 nsr permit have been modified to meet Part 70 requirements.

Other specific monitoring requirements include:

### Monitoring requirements for emission units ES 1 and 2 (Bigelow boilers)

- At least one time per week an observation of the presence of visible emissions from each operating Bigelow boiler (ES-1 and 2) stack shall be made. If visible emissions are observed the permittee shall:
  - take timely corrective action such that the boiler resumes operation with no visible emissions, or,
  - perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A,



Method 9 to assure visible emissions from the boiler stack does not exceed 20 percent opacity.

The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed twenty percent, the VEE shall be conducted for a total of 60 minutes. If compliance is not demonstrated by this VEE, timely corrective action shall be taken such that the boiler resumes operation with visible emissions of 20 percent or less.

The permittee shall maintain a boiler observation log to demonstrate compliance. The log shall include the date and time of the observations, whether or not there were visible emissions, any VEE recordings and any necessary corrective action.

- The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to the Bigelow boilers (ES-1 and 2) and multicyclones:
  - Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance for the boilers and multicyclones.
  - Develop an inspection schedule, monthly at a minimum, to insure operational integrity of the boilers and multicyclones and maintain records of inspection results.
  - Have available written operating procedures for the boilers and multicyclones. These procedures shall be based on the manufacturer's recommendations, at minimum, if such recommendations exist.
  - Train operators in the proper operation of the boilers and multicyclones and familiarize the operators with the written operating procedures.

Monitoring requirements for emission units ES-4 (woodworking equipment)

- Each fabric filter shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.
- At least one time per week an observation of the presence of visible emissions from each operating fabric filter exhaust shall be made. If visible emissions are observed the permittee shall:
  - take timely corrective action such that the fabric filter resumes operation with no visible emissions, or,
  - perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the fabric filter does not exceed 20 percent opacity. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed twenty percent, the VEE shall be conducted for a total of 60 minutes. If compliance is not demonstrated by this VEE, timely corrective action shall be taken such that the fabric filter resumes operation with visible emissions of 20 percent or less.

The permittee shall maintain a fabric filter observation log to demonstrate compliance. The log shall include the date and time of the observations, whether or not there were visible emissions, any VEE recordings and any necessary corrective action.

Monitoring requirements for emission units ES-3a (12 conventional wood finishing spray booths)

- The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to the process equipment which affect such emissions:
  - Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
  - Have available written operating procedures for the spray booths. These procedures shall be based on the manufacturer's recommendations, at minimum, if such recommendations exist.
  - Train operators in the proper operation of the spray booths and familiarize the operators with the written operating procedures.
  - Maintain an inventory of spare parts that are needed to minimize durations of equipment breakdowns.

Monitoring requirements for emission units WB 1-3 (3 conventional wood finishing spray booths) and ES-3b (2 metal furniture finishing spray booths)

- The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, and process equipment which affect such emissions:
  - Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
  - Maintain an inventory of spare parts.
  - Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
  - Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures.

**Recordkeeping and Reporting**

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

Recordkeeping and reporting requirements for emission units ES 1 and 2 (Bigelow boilers)

- The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the WCRO Regional Director. These records shall include, but are not limited to:
  - results of the weekly opacity observation of the Bigelow boiler (ES-1 and 2) stacks, along with any corrective actions,
  - the annual combustion of each fuel (*wood in millions of btus*, fuel oil in gallons) in the Bigelow boilers (ES-1 and 2), calculated monthly as the sum of each consecutive 12-month period, and

- the sulfur content for each shipment of No. 2 fuel oil to be burned in the Bigelow boilers (ES-1 and 2).

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

- The permittee shall maintain records of the required training including a statement of time, place and nature training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the boiler(s). These procedures shall be based on the manufacturer's recommendations, at minimum. All records required by this condition shall be kept on site and made available for inspection by the DEQ.

Recordkeeping and reporting requirements for emission units ES-4 (woodworking equipment)

- The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the West Central Regional Office. These records shall include, but are not limited to:
  - results of the weekly opacity observation of the fabric filter exhausts, along with any corrective actions,
  - results of weekly observations of the pressure drop readings and verification that the reading is indicative that the fabric filters are operating in accordance with manufacture specificationsThese records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

Recordkeeping and reporting requirements for emission units ES-3a (12 conventional wood finishing spray booths)

- The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the West Central Regional Office. These records shall include, but are not limited to:
  - records required to comply with 40 CFR Part 63, Subpart JJ (Wood Furniture MACT)These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

Recordkeeping and reporting requirements for emission units WB 1-3 (3 conventional wood finishing spray booths) and ES-3b (2 metal furniture finishing spray booths)

- The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the West Central Regional Office. These records shall include, but are not limited to:
  - Monthly and annual throughput (in tons of VOCs) for the operation of the two metal finishing spray booths and three wood finishing spray booths. Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.

- Pounds of VOC/gallon coating used in the operation of the two metal finishing booths. VOC content shall be averaged on a monthly basis.
- Material Safety Data Sheets (MSDS), Certified Product Data Sheets, or other vendor information showing VOC content, HAP content, water content, and solids content for each coating, thinner, and cleaning material used.
- Monthly and annual VOC emissions. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- Kilograms of VOC per liter of solids applied or lbs. of VOC per gallon of solids applied for each coating, thinner, and cleaning material used in the two metal finishing booths.
- Quantities of coatings, thinners, and cleaning materials used calculated monthly as the sum of each consecutive 12-month period.

These records shall be available for inspection by the DEQ and shall be current for at least the most recent five years.

#### Facility-wide recordkeeping and reporting requirements

- The permittee is required to submit an annual compliance certification to DEQ and EPA no later than March 1 of each year for the previous calendar year.
- Semi-annual monitoring reports are to be submitted to DEQ to include all of the monitoring activities conducted in accordance with the permit.

#### **Testing**

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA has authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

#### **Streamlined Requirements**

Conditions streamlined from the May 5, 2004 nsr permit written for the construction and operation of two metal finishing spray booths and three wood finishing spray booths include the following:

Condition 13 - Initial Notifications - The permittee shall furnish written notification to the Director of the West Central Regional Office and EPA:

- The actual date on which construction of the wood finishing booths commenced within 30 days after such date.
- The anticipated start-up date of the wood finishing booths postmarked not more than 60 days nor less than 30 days prior to such date.
- The actual start-up date of the wood finishing spray booths within 15 days after such date.

Initial notifications have been made.

Condition 15 - Permit Invalidity - This permit to construct three wood finishing booths shall become invalid, unless an extension is granted by the DEQ, if:

- A program of continuous construction is not commenced before the latest of the following:
  - 18 months from the 2004 date of this permit;
  - Nine months from the date that the last permit or other authorization was issued from any other governmental agency;
  - Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or
- A program of construction is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

Construction of the spray booths has been completed.

## **GENERAL CONDITIONS**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

### **Comments on General Conditions**

#### **B. Permit Expiration**

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement No. 3-2001".

#### **F. Failure/Malfunction Reporting**

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities.

Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

#### **U. Malfunction as an Affirmative Defense**

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180.

#### **Y. Asbestos Requirements**

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

#### **STATE ONLY APPLICABLE REQUIREMENTS**

*there are no state only requirements in the permit*

#### **FUTURE APPLICABLE REQUIREMENTS**

*no future applicable requirements have been identified*

#### **INAPPLICABLE REQUIREMENTS**

*no requirements were sited as being inapplicable*

#### **COMPLIANCE PLAN**

*this facility is not subject to a compliance plan at this time*

#### **INSIGNIFICANT EMISSION UNITS**

The Lumber drying kilns are identified as insignificant due to emission levels (VOC) being below 5 tons per year.

#### **CONFIDENTIAL INFORMATION**

*no confidential information was submitted as a part of this application*

#### **PUBLIC PARTICIPATION**

The draft/proposed permit was placed on public notice in the Martinsville Bulletin on November 19, 2004. The required 30-day notice period ended on December 20, 2004. This permit was advertised for concurrent review as a draft/proposed permit. EPA's review period ended on

January 4, 2005. No comments were received from the public or EPA during the comment period.